



NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS						
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>						
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>						
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Other <input type="checkbox"/>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
FAULT CATEGORY												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <hr/> <hr/> <hr/>	
											<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <hr/> <hr/> <hr/>	
											<input type="checkbox"/> Other	

Work Order ID 106073

\*106073\*

Page 2

August-28-13 12:40:38 PM

Item ID: D3953-17

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Gas Spring Spacer

Start Date: 8/28/13 Start Qty: 40.00

\*40\*

Cust Item ID:

Required Date: 8/28/13 Req'd Qty: 40.00

\*40\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

120

QC8- Inspect parts - second check

\*120\*

QC

Quality Control

Set Up/  
Run Hours

0.00 DAS

27

9.89

0.00 13/11/12

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

Identify as per dwg & Stock Location: 5T076 0.00

\*130\*

Packaging

Packaging

0.00

DAS  
28  
9.89

13-11-12

140

QC21- Final Inspection - Work Order Release 0.00

\*140\*

QC

Quality Control

0.00

13/11/13

MF  
13-11-13

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>			
				Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>			
				Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>			
				Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>			
				Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>				
				Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>				
				Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>			
				Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>					
				Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>					
				Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>					
				Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>					

# Picklist Print

August-28-13 12:40:37 PM

Page 1

Work Order ID: 106073

Parent Item: D3953-17

Parent Item Name: Gas Spring Spacer

Start Date: 8/28/13

Required Date: 8/28/13

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP RevA: New issue DD verified by:EC  
verified by:EC

IPP Rev:B as per dwg revC DD 10.03.02

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.375X03.000		Purchased	No			100	f	8.0800	0.03125	1.315788			A 1.32
M304 SS bar .375 x 3.00													13.11.08

Location	Loc Qty	Loc Code
MAT051	8.08	
125340	8.08	

125340 → 1.32  
Jan  
13.11.08

NCR: Yes / No

DQA: Date:

## **WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
				Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio							
				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge							
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled							
				<input type="checkbox"/> Other							

DART AEROSPACE LTD	Work Order:	106073
Description: Gas Spring Spacer	Part Number:	D3953-17
Inspection Dwg: D3953      Rev: C		Page 1 of 1

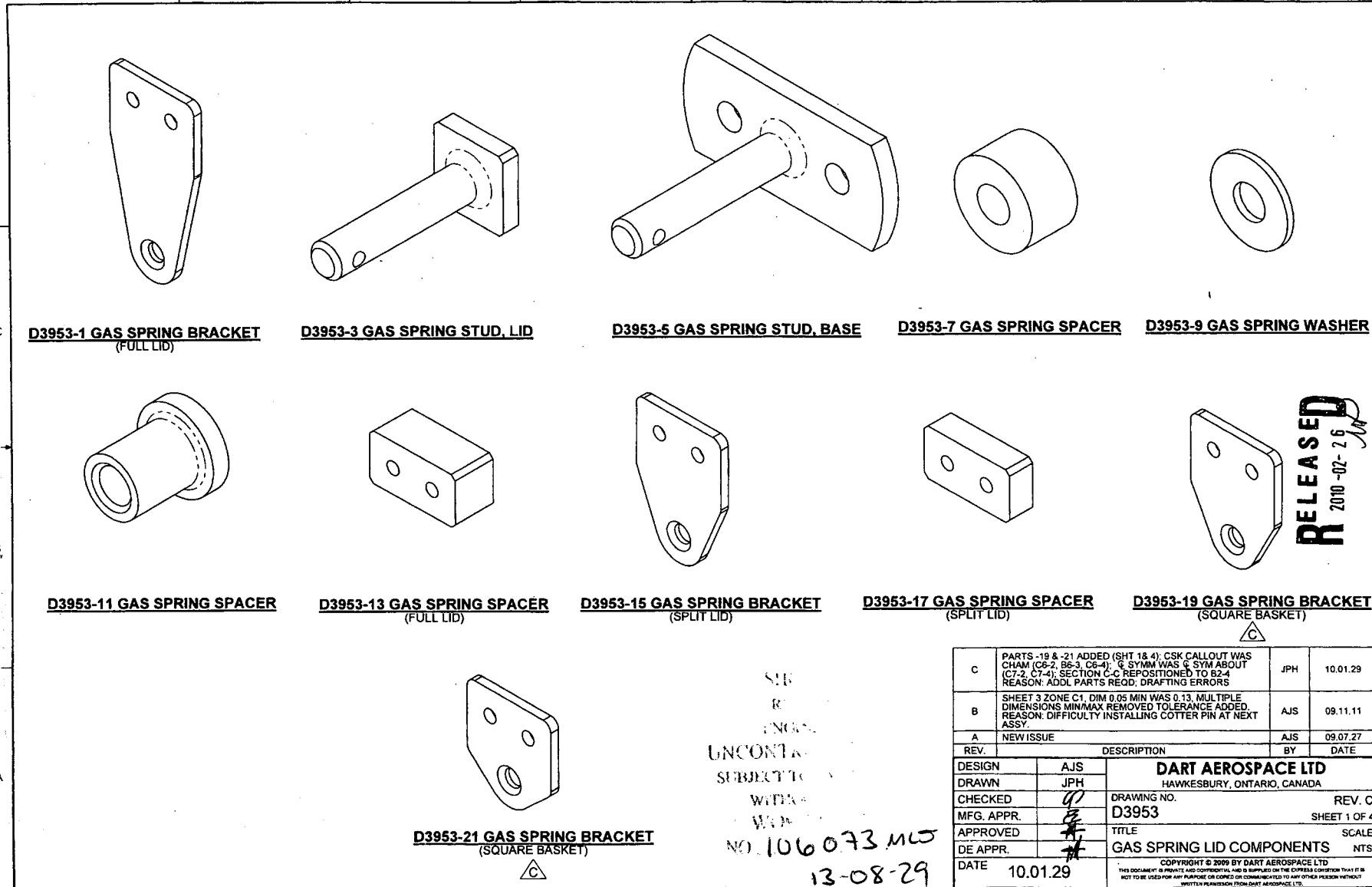
## **FIRST ARTICLE INSPECTION CHECKLIST**

## X First Article      Prototype

2

<b>Measured by:</b>	Jm	<b>Audited by:</b>	9-89	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	13-11-11	<b>Date:</b>	13/11/11	<b>Date:</b>	N/A

<b>Rev</b>	<b>Date</b>	<b>Change</b>	<b>Revised by</b>	<b>Approved</b>
A	09.10.22	New Issue	KJ	
B	09.12.14	Dwg Rev updated	KJ	 



**D3953-1 GAS SPRING BRACKET** **D3953-3 GAS SPRING STUD, LID** **D3953-5 GAS SPRING STUD, BASE** **D3953-7 GAS SPRING SPACER** **D3953-9 GAS SPRING WASHER**

(FULL LID)

(FULL LID)

(SPLIT LID)

(SPLIT LID)

(SQUARE BASKET)

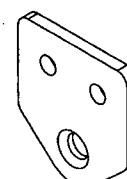
**D3953-11 GAS SPRING SPACER**

**D3953-13 GAS SPRING SPACER**  
(FULL LID)

**D3953-15 GAS SPRING BRACKET**  
(SPLIT LID)

**D3953-17 GAS SPRING SPACER**  
(SPLIT LID)

**D3953-19 GAS SPRING BRACKET**  
(SQUARE BASKET)



**D3953-21 GAS SPRING BRACKET**  
(SQUARE BASKET)

SIR

RE:

ENCL:

UNCONT.

SUBJECT TO:

WITH:

W/:

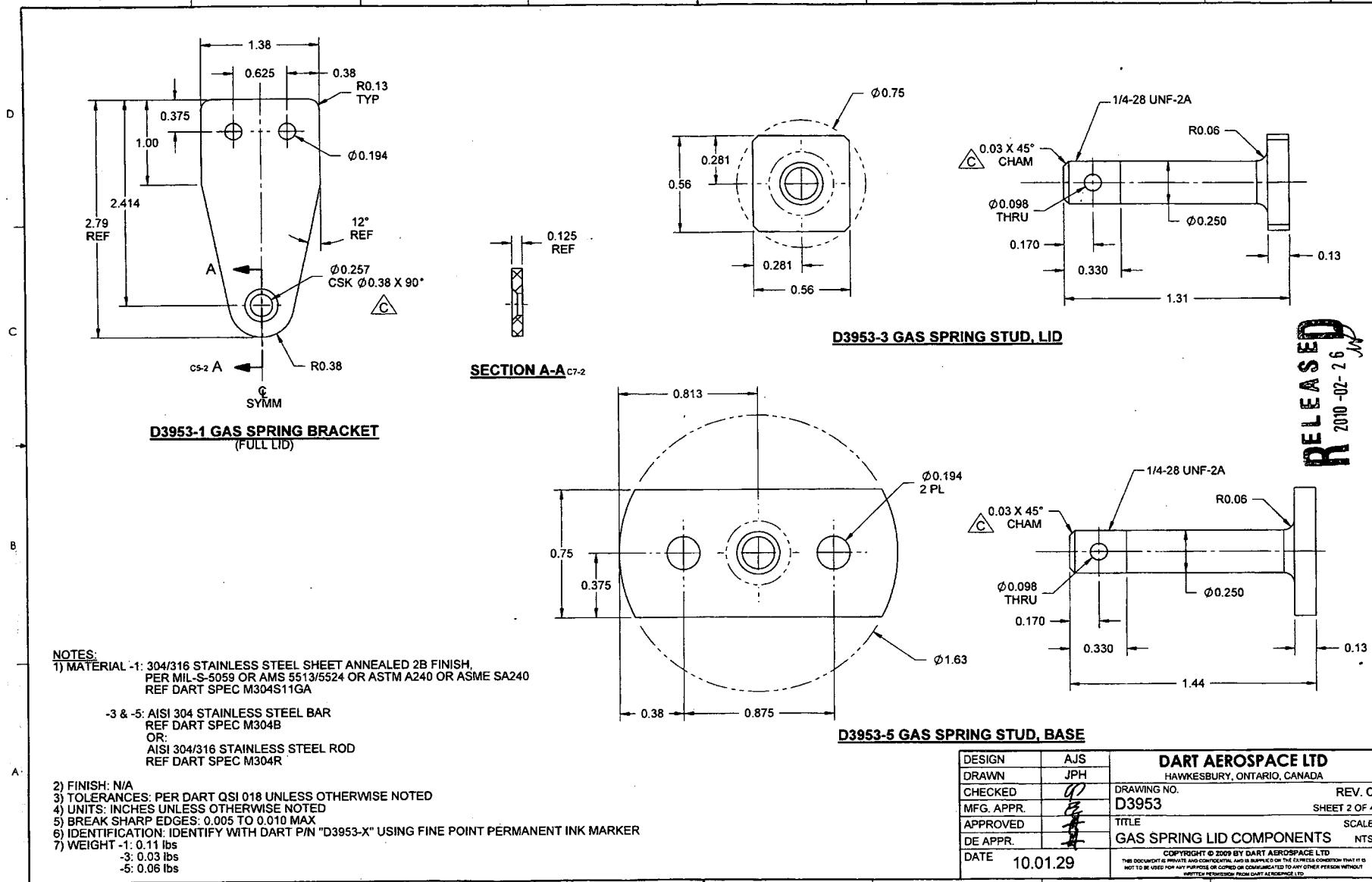
NO:

106073 MU

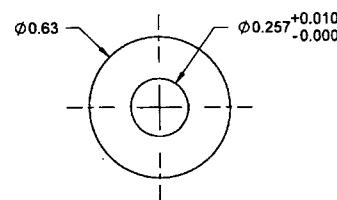
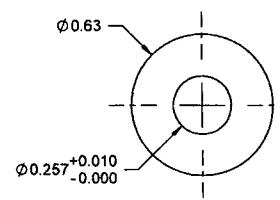
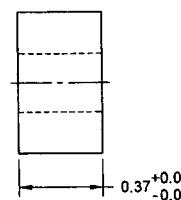
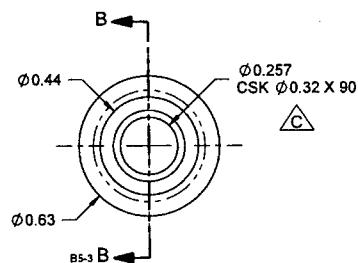
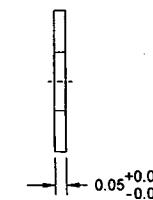
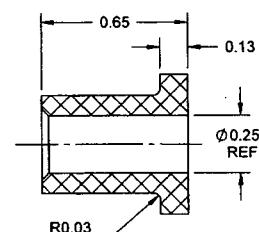
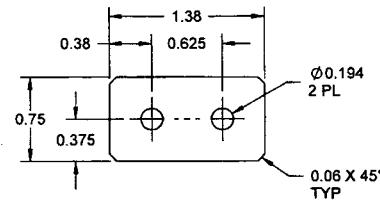
13-08-29

C	PARTS -19 & -21 ADDED (SHT 1&4). CSK CALLOUT WAS CHAM (C6-8, B6-8, C6-4). SYMBOL WAS A SYM ABOUT (C6-4). SECTION C-C WAS REMOVED. REASON: ADDL PARTS REQD. DRAFTING ERRORS	JPH	10.01.29
B	SHEET 3 ZONE C1, DIM 0.05 MIN WAS 0.13, MULTIPLE TOLERANCES MIN/MAX REMOVED TOLERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY.	AJS	09.11.11
A	NEW ISSUE	AJS	09.07.27
REV.	DESCRIPTION		
DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	00	DRAWING NO. REV. C	
MFG. APPR.	PP	D3953 SHEET 1 OF 4	
APPROVED	PP	TITLE	SCALE
DE APPR.	PP	GAS SPRING LID COMPONENTS NTS	
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED UNDER THE CONDITION THAT IT IS NOT TO BE USED FOR ANY OTHER PURPOSE OR PROVIDED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

106073

RELEASED  
2010-07-26

106073

D3953-7 GAS SPRING SPACERD3953-9 GAS SPRING WASHERD3953-11 GAS SPRING SPACERSECTION B-B B7-3D3953-13 GAS SPRING SPACERRELEASED  
2010-02-26  
*[Handwritten signature]*

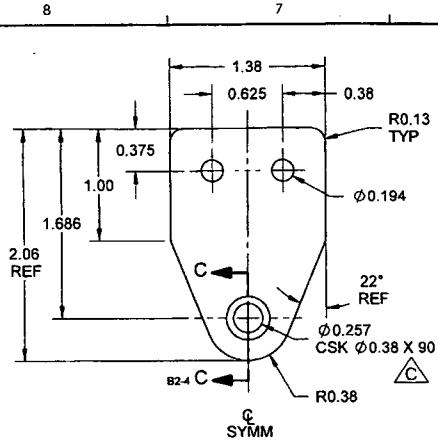
## NOTES:

- 1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK  
REF DART SPEC M-DELRIN-R
- 13: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT -7/-9/-11: < 0.01 lbs EACH  
-13: 0.17 lbs

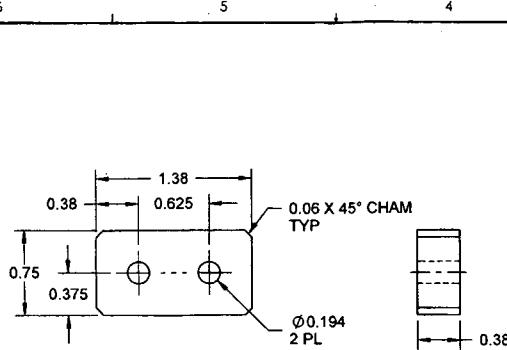
DESIGN	AJS	DART AEROSPACE LTD
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	DRAWING NO.
MFG. APPR.	<i>[Signature]</i>	REV. C
APPROVED	<i>[Signature]</i>	D3953
DE APPR.	<i>[Signature]</i>	SHEET 3 OF 4
DATE	10.01.29	TITLE
		GAS SPRING LID COMPONENTS
		NTS

COPYRIGHT © 2009 BY DART AEROSPACE LTD  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
NOT TO BE USED FOR ANY PURPOSE OTHER THAN COMMUNICATED TO ANY OTHER PERSON WITHOUT  
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

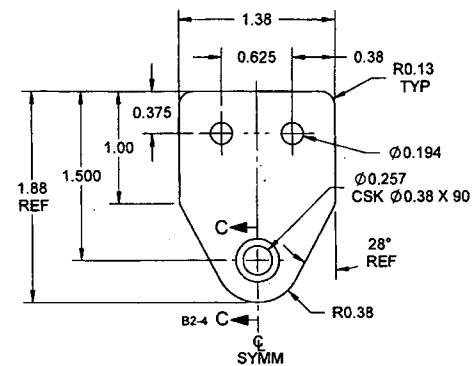
106073



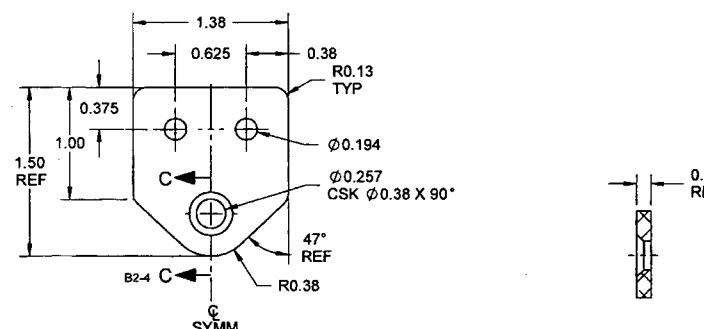
**D3953-15 GAS SPRING BRACKET  
(SPLIT LID)**



**D3953-17 GAS SPRING SPACER  
(SPLIT LID)**



**D3953-19 GAS SPRING BRACKET  
(SQUARE BASKET)**



**D3953-21 GAS SPRING BRACKET  
(SQUARE BASKET)**

**NOTES:**  
1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S11GA

-17: AISI 304 STAINLESS STEEL BAR  
REF DART SPEC M304B

- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT -15: 0.08 lbs  
-17: 0.10 lbs  
-19: 0.07 lbs  
-21: 0.06 lbs

**SECTION C-C** C7-4  
C2-4  
B4-4  
**RELEASED** 2010-02-26  
A

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PP	DRAWING NO. REV. C	
MFG. APPR.	EZ	D3953 SHEET 4 OF 4	
APPROVED	TT	TITLE SCALE	
DE APPR.	TT	GAS SPRING LID COMPONENTS NTS	
DATE	10.01.29	COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	